<u>Amendments to the Specification:</u>

Please replace the paragraph [0040], with the following rewritten paragraph:

[0040] The symbols used in FIG. 3 are as follows:

G_N: (Linear) Noise-Adaptive Gain

G_A: (Linear) Level-Normalizing Gain

G_L: Compressor Limiter Gain

G_E: Expander Gain

G_C: Compressor Gain

G_{TOT}: Total Gain; and

~~G_{MAX}: Maximum Allowable Total Gain; and~~

G_M: Master Gain

Please replace the paragraph [0041], with the following rewritten paragraph:

[0041] In an illustrative embodiment of the present invention, the total gain of compander 23 shown in FIG. 3 is calculated as follows:

$$G_{TOT} = G_A \cdot G_N$$

To arrive at the master gain G_M, the total gain G_{TOT} is limited by G_{MAX} the maximum allowable total gain, G_C, G_E, G_L, that is,

$$G_M = \min\{G_{TOT}, G_{MAX}, G_C, G_E, G_L\}.$$

From this relationship it can be seen that the units making up a compander namely, the compressor, expander and limiter units, all have a similar effect on the noise compensation gain. Each reduces the total gain G_{TOT} for different reasons. The expander unit reduces the total gain

to make sure that far-end noise is not amplified as much as far-end speech; the compressor unit

reduces the gain to allow a higher total gain in the linear range; while the limiter reduces the total

gain to avoid clipping of the far-end signal.

Please replace the paragraph [0048], with the following rewritten paragraph:

[0048] Viewing FIGS. 3 and 4 together, it can be seen that the near end noise N_y, which

determines which curve A-C will be used by units 300,500, is not directly detected by units

300,500. Instead, NGC gain unit 101 first receives the near end noise N_y from near end estimator

4. Next, NGC gain unit 101 is adapted to calculate a desired gain in accordance with curves of

its own (see FIG. 9, to be discussed later). The resulting gain, G_N, from NGC gain unit 101 is

~~added~~ multiplied ~~to~~ with the gain, G_A, from AGC gain unit 100 to form a total gain, G_{TOT}. It is

this gain which is input into unit 300 which controls which curve will be utilized by units

300,500, and, therefore how much compensation will be applied to a given signal.

Please replace the paragraph [0052], with the following rewritten paragraph:

[0052] Referring now to FIG. 6, there are shown curves AD, BD, and CD which illustrate

compressor and limiter gain units 300,500 adapted to operate in an input-output bounded mode,

where the compressor range is no longer bounded by the input only or the output only (i.e., when

the near-end noise level varies, the compression range onset point does not move partially along

a vertical line (input-bounded) or ~~a~~ along a horizontal line (output-bounded)).

Please replace the paragraph [0053], with the following rewritten paragraph:

[0053] FIG. 7 depicts alternative curves A', B', and C' associated with compressor limiter

gain units 300,500 adapted to operate in an input-output bounded mode (similar to FIG. 6).

However, unlike the operation of the units operating in accordance with the curves illustrated in

FIG. 6, units operating in accordance with the curves shown in FIG. 7 use variable compression

ratios. More specifically, companders envisioned by the present invention operating in

accordance with the curves shown in FIG. 7 are adapted to apply a variable amount of

compression only after a total gain reaches an amount equal to $G4 \geq 0$. In an illustrative

embodiment of the present invention, the compressor and limiter gain units 300,500 may be

adapted to operate logarithmically (e.g. a logarithmic-based program). Alternatively, the

compressor and limiter gain units 300,500 may further comprise lookup tables adapted to store or

otherwise implement the curves shown in FIG. 7.

Please replace the paragraph [0057], with the following rewritten paragraph:

[0057] In yet another embodiment, the expander onset point (that is, the point where

expander line B-20 in Fig. 2 and linear amplification line C-30 intersect) is adapted to the far-end

noise level. If the average far-end noise level decreases, the expander onset point is also

decreased, and vice versa. This feature of the present invention may be carried out by either

compander section. For example, the first compander section may be adapted to reduce the

amplification of low level, far-end noise based on a far-end noise level estimate.

Please replace the paragraph [0069], with the following rewritten paragraph:

[0069] In an illustrative embodiment of the invention, an AGC gain unit 100 is adapted to

amplify signal levels (e.g., speech and noise) in accordance with the curve shown in FIG. 10. As

before, this curve is only an example of the many curves envisioned by the present invention.

The solid line "A_" shows a nominal gain while the dashed lines "B_, C_" represent the curve's

hysteresis.

Please replace the paragraph [0073], with the following rewritten paragraph:

[0073] The compander 230 comprises similar components as the compander 23 in Fig. 3.

For example, compander 230 comprises both near- and far-end noise estimators 4000,5000, an

AGC gain unit 1000, an NGC gain unit 1001, expander, compressor and limiter gain units

~~2200~~2000, 2300,2500 along with a master gain unit 2400. In addition, compander 230 is shown

comprising "attack and release" control units 1000A, 1001A and 2323. It should be understood

that the units 100,101,200,300, ~~500~~ shown in Fig. 3 also comprise attack and release control

units but, to simplify the explanation above, these units were not split up into their static and

dynamic components/elements. That said, the compander 230 shown in Fig. 12 is somewhat

different than compander 23 shown in Fig. 3. For one thing, attack and release control unit 2323

is associated with both the expander and compressor gain units ~~2200~~2000, 2300. As envisioned

by the present invention, the compander 23 shown in Fig. 3 would necessarily use separate attack

and release control units for each of the expander and compressor gain units 200,300,~~500~~. Using

the same control unit reduces the amount of computation (i.e., time) needed to generate the right

amount (i.e., level) of amplification/gain.